

**Basic Histopathological Diagnosis (MLS-HIST-421)**

***Histopathology and cytology department***

***Pathology department***

Lec 35 and 36 and 37

Male genital system

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# Objectives

- To know some of the diseases that affect male genital tract
- To explain the pathology behind these diseases
- To identify the morphologic features of these diseases

- Penis disorders
- Scrotum testis and epididymis
- prostate

# Penile disorders

# Penile disorders

- Malformations
- Inflammatory lesions
- Neoplasms

# Malformations of the penis

# Hypospadias

- More common than epispadias
- Along the ventral aspect of the penis
- Increase the risk for UTI
- Associated with other congenital anomalies

# Epispadias

- Urethral orifice on the dorsal aspect of the penis
- Can lead to UTI
- Associated with bladder extrophy



# Bladder extrophy



# Inflammatory lesions of the penis

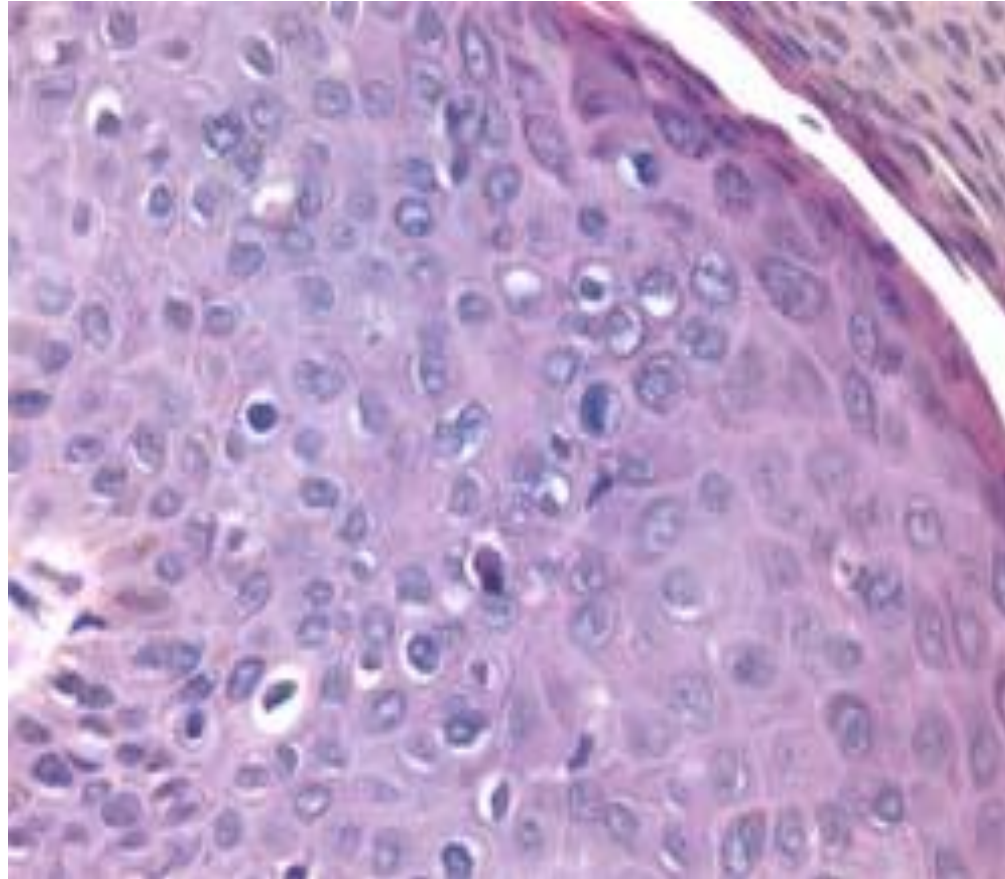
- Balanitis
  - Inflammation of glans penis
  - Poor hygiene
- Phimosis
  - Perpuce can not be retracted over the glans penis
  - Congenital
  - Acquired ( balanoposthitis)
- Candidiasis

# Neoplasms of the penis

# Intra-epithelial carcinoma (carcinoma in situ)

- Bowen disease
  - Older uncircumcised males
  - Grossly appear as solitary plaquelike lesion
  - Histological examination.....no invasion of the stroma
  - Can progress to SCC in 33% of patients

# Bowen disease



- Erythroplasia of Queyrat
- Present with erythematous patch on the glans penis

- Bowenoid papulosis
  - In young sexually active males
  - Multiple reddish brown papules
  - Rare progression to carcinoma



# SCC

- In uncircumcised pt older than 40
- Risk factors (poor hygiene, smoking and HPV 16,18)
- Gray crusted papular lesion, indurated and ulcerated lesion with irregular margins
- Histologic examination:
  - Keratinizing squamous cell carcinoma
- May spread to inguinal LNs

# Carcinoma of the penis



Scrotum, testis and epididymis

# Cryptorchidism

- Incomplete descent of the testis
- 1% in 1 year old males
- Can lead to tubular atrophy and sterility
- 3-5 fold increased risk of cancer
- Orchiopexy reduces these risks

# Inflammatory lesions

- More common in the epididymis
- Mumps and tuberculosis
- Testis become swollen and congested
- Lymphoplasmacytic infiltrate
- In severe cases tubular atrophy, fibrosis and sterility

# Testicular tumors

- Seminomas
- Non seminomatous germ cell tumors
  - Undifferentiated embryonal carcinomas
  - Differentiate along extra-embryonic lines (yolk sac tumors and choriocarcinoma)
  - Differentiate along somtic cell lines (teratomas)

# Seminomas

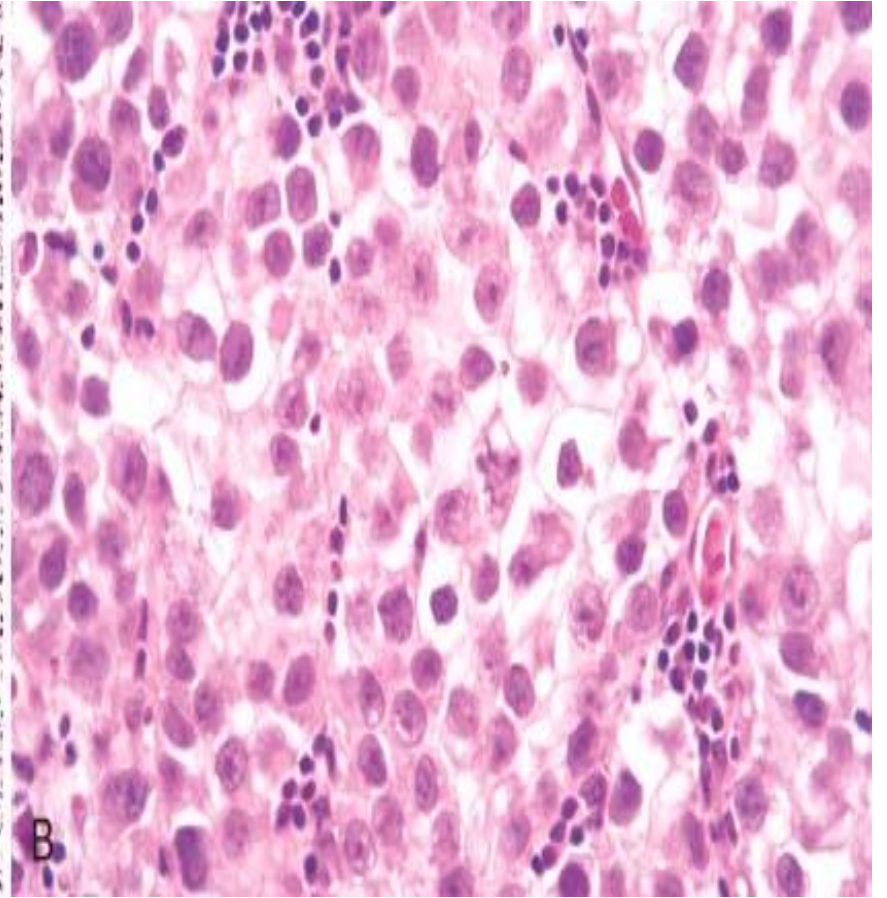
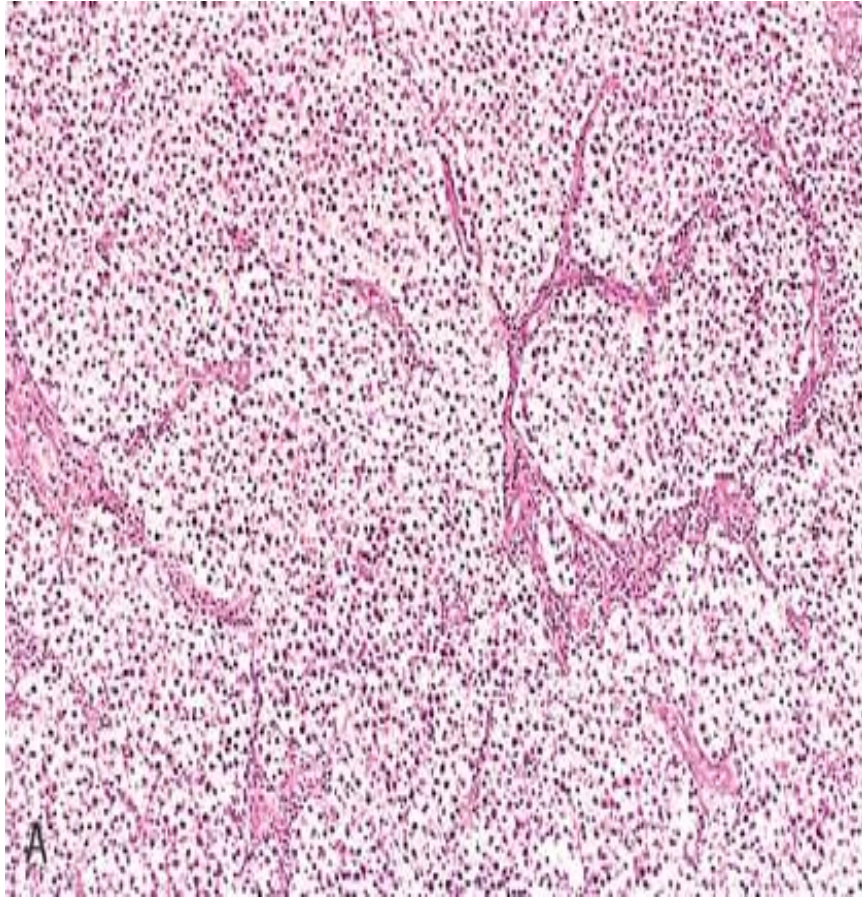
- Well demarcated soft white to gray tumor
- Confined to the testis by intact tunica albuginea
- May spread to local para-aortic LNs but distal mets is rare
- HCG may be positive

- Morphologically:
- Arranged in lobules with intervening fibrous septa
  - Large uniform cell with distinct cell borders
  - Clear glycogen rich cytoplasm
  - Rounder nuclei with conspicuous nucleoli
  - Lymphocytic infiltrate



# Seminoma

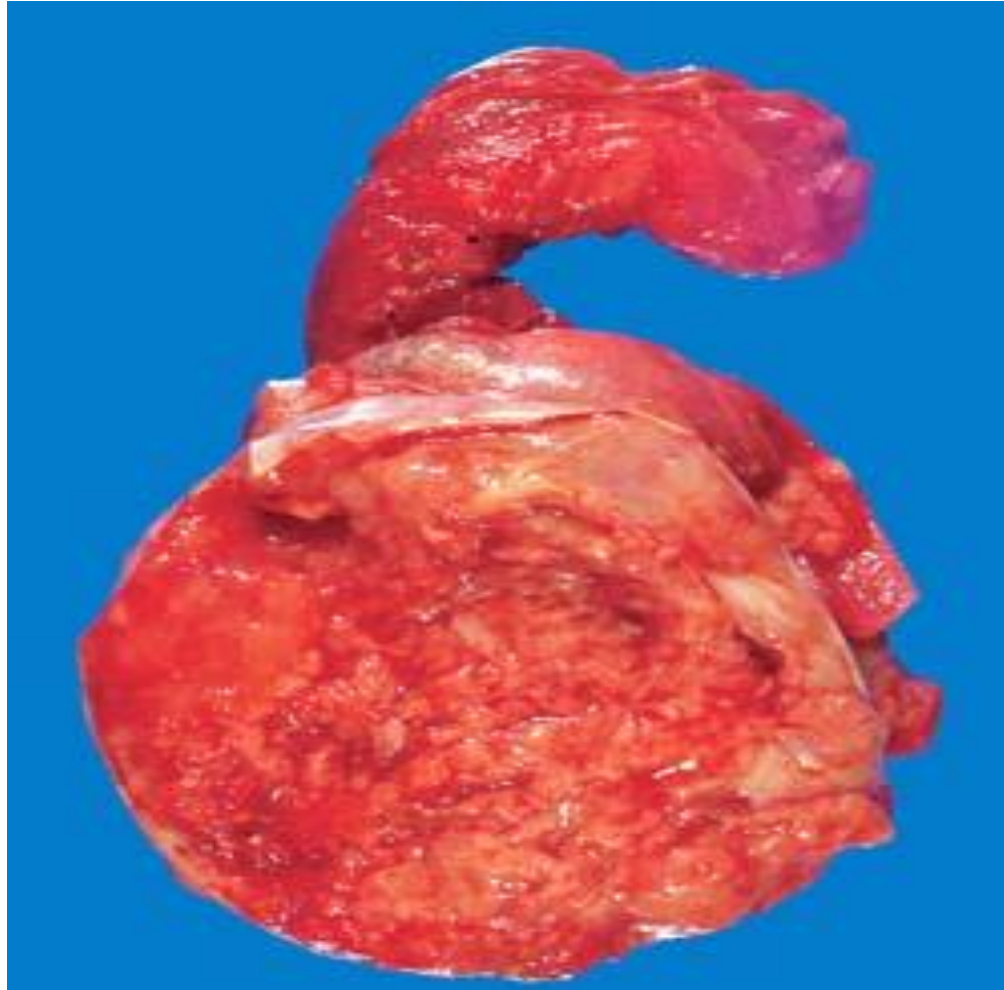




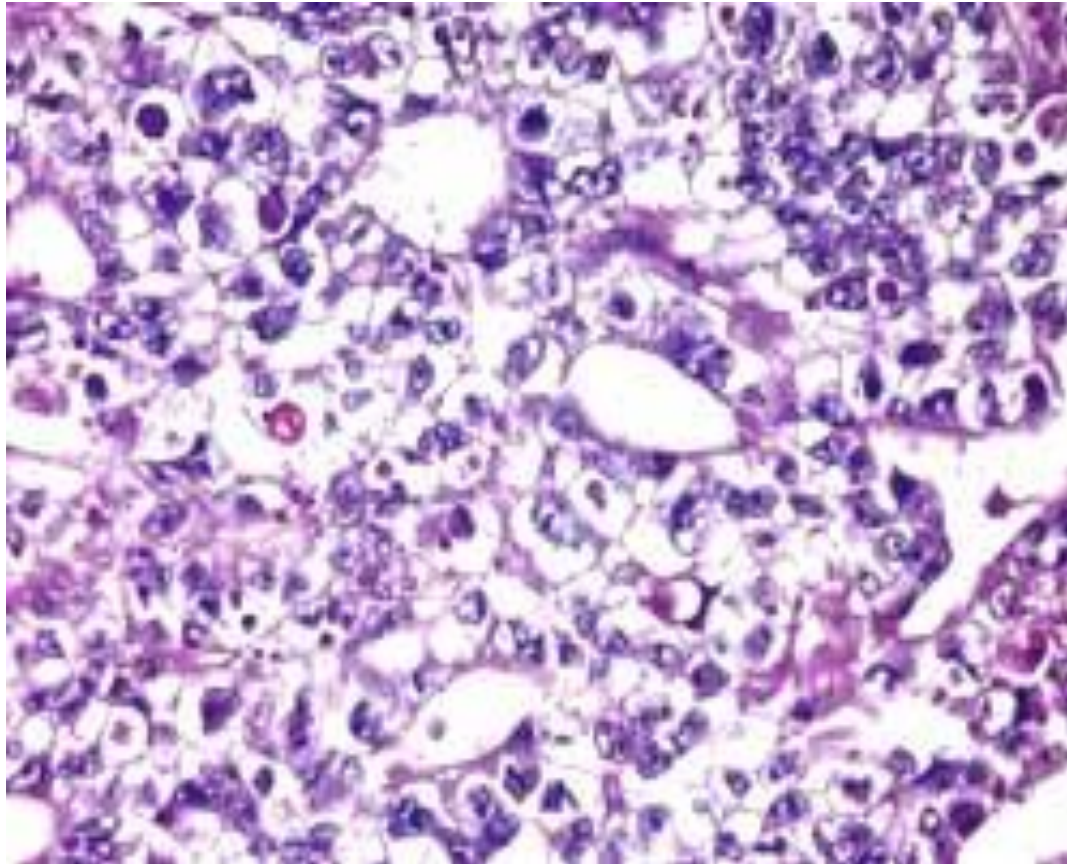
# Embryonal carcinomas

- Ill defined invasive masses with foci of hemorrhage and necrosis
- Morphologically
  - Large primitive cells with indistinct borders and basophilic cytoplasm, large nuclei and prominent nucleoli
  - Other patterns of germ cell tumor may be present

# Embryonal tumors



# Embryonal tumor



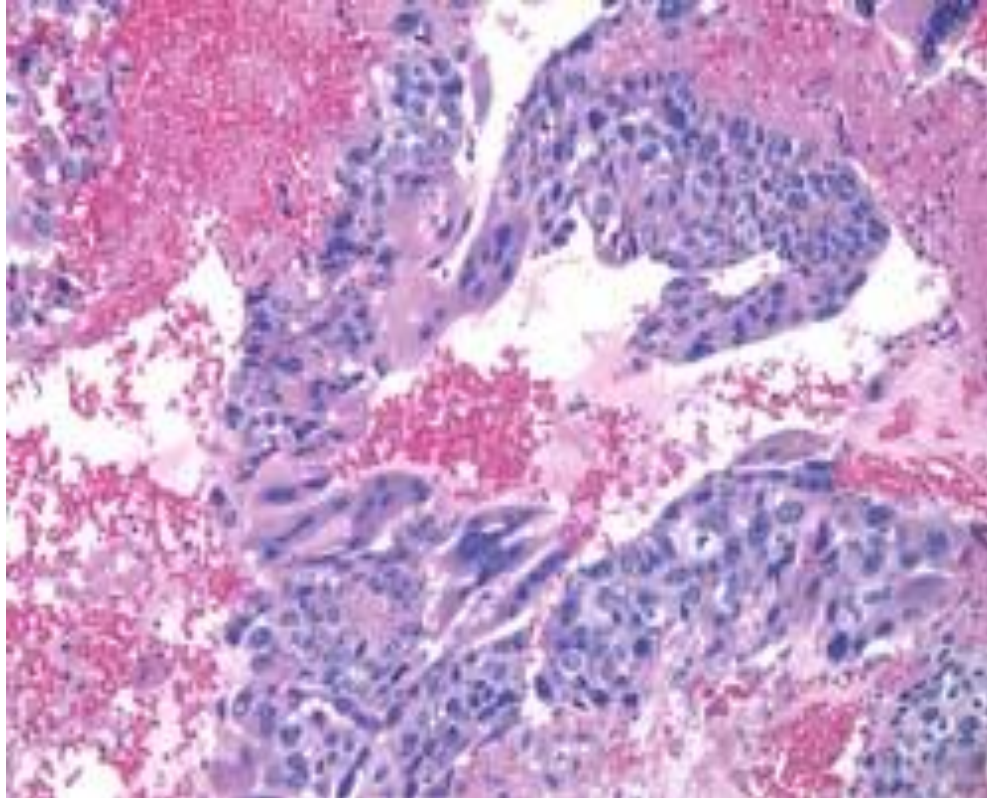
# Yolk sac tumors

- In children less than 3 years
- Large, well demarcated
- Morphologically:
  - Low columnar to cuboidal cells forming cysts, sheets or papillae
  - Presence of schiller Doval bodies (structure look like glomeruli)
  - Alpha fetoprotein may be seen by immunohistochemistry

# Choriocarcinomas

- Small non palpable lesion
- Contain cytotrophoblasts and syncytiotrophoblasts

# Choriocarcinoma

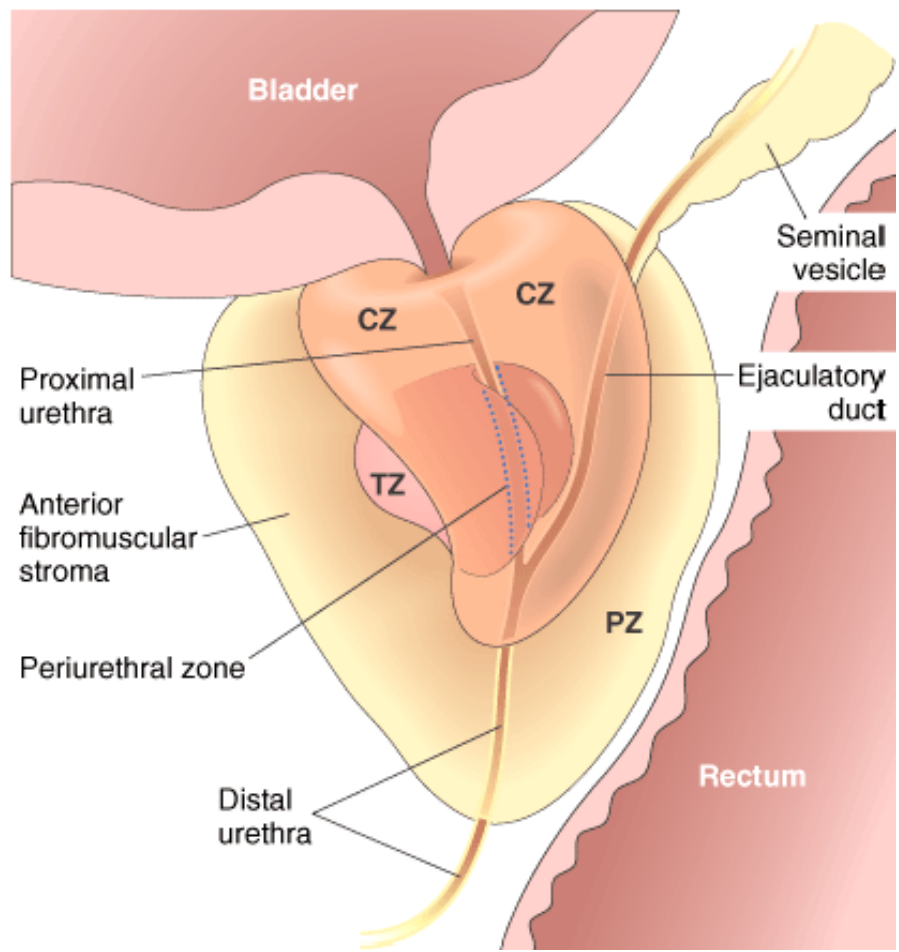




# Teratomas

- Mature contain fully differentiated tissues
- Immature contain immature somatic elements

Prostate



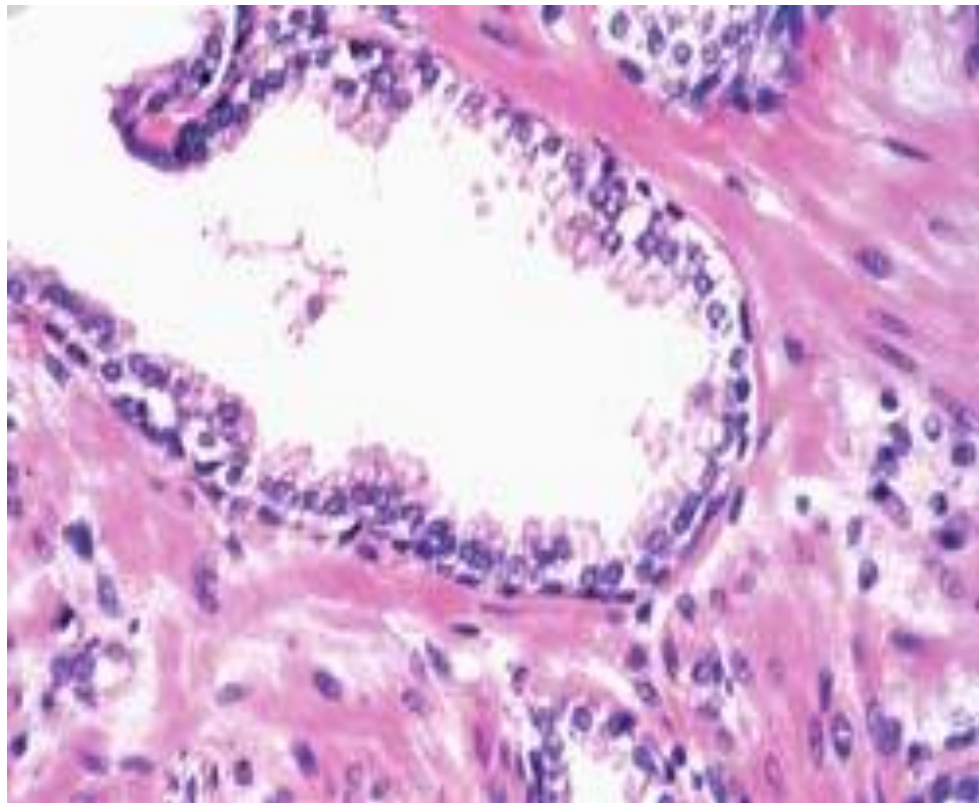
# Prostatitis

- Acute
  - E. coli and other gram - rods
  
- Chronic
  - C. trachomatis
  - U. urealyticum

- Present with dysuria, frequency and low back pain

# Nodular hyperplasia of the prostate

- Benign proliferation of stromal and glandular elements
- Mostly affect inner periurethral zone  
.....compress prostatic urethra
- Morphologically:
  - Hyperplastic glands lined by 2 cell layers



# Carcinoma of the prostate

- 65-75 years of age
- Hormones, genes and environment play a role
- More in blacks
- Arise in the outer peripheral gland  
.....palpable per rectum
- Present with LUTS obstruction or mets (bones)
- High PSA



- Morphologically:
  - Adenocarcinomas with variable differentiation
  - Gland lined by single layer

